

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YUN LING AND DANIEL T. TONG

Appeal 2006-0542
Application 10/054,083
Technology Center 2800

Decided: April 3, 2007

Before KENNETH W. HAIRSTON, LANCE LEONARD BARRY,
and ALLEN R. MacDONALD, *Administrative Patent Judges*.

BARRY, *Administrative Patent Judge*.

DECISION ON REQUEST FOR REHEARING

I. STATEMENT OF THE CASE

A Patent Examiner rejected claims 1, 3-11, and 13-19 under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,603,625 ("Tondreault") and U.S. Patent No. 5,470,240 ("Suzuki"). The Appellants appealed therefrom under 35 U.S.C. § 134(a). We affirmed. Pursuant to 37 C.F.R. § 41.52(a)(1), the

Appellants now ask us to reconsider our affirmance. We have jurisdiction under 35 U.S.C. § 6(b).

II. CLAIM GROUPING

"When multiple claims subject to the same ground of rejection are argued as a group by appellant, the Board may select a single claim from the group of claims that are argued together to decide the appeal with respect to the group of claims as to the ground of rejection on the basis of the selected claim alone. Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately." 37 C.F.R. § 41.37(c)(1)(vii) (Sep. 13, 2004).¹

Here, the Appellants argued claims 1 and 3-10, which are subject to the same ground of rejection, as a group. (Br. 3-8.) They likewise argued claims 11 and 13, which are subject to the same ground of rejection, as a group, (*id.* 8-9), and claims 14-19, which are subject to the same ground of rejection, as a group. (*Id.* 10-11.) Therefore, we selected claims 1, 11, and 14 as the sole claims on which to decide the appeal of the respective groups. With the aforementioned representation in mind, rather than reiterate our original opinion and the Appellants' contentions *in toto*, we focus on the four issues.

¹ We cite to the version of the Code of Federal Regulations in effect at the time of the Appeal Brief. The current version includes the same regulations.

III. ENGAGING SURFACE AND LEVER FORCE

The Appellants argue, "The surfaces of the first lever 39(1) are used to support the board. Suzuki does not teach or suggest the recited engaging surface to apply a lever force to the card." (Req. Reh'g 4.) Therefore, the issue is whether the prior art would appear to have suggested an engaging surface of a lever for applying a force to a card during insertion of the card in the slot of a connector and actuation of that lever.

In addressing the issue, the Board conducts a two-step analysis. First, we construe the representative claim at issue to determine its scope. Second, we determine whether the construed claim would have been obvious.

A. CLAIM CONSTRUCTION

Our analysis begins with construing the claim limitations at issue. "[T]he PTO gives claims their 'broadest reasonable interpretation.'" *In re Bigio*, 381 F.3d 1320, 1324, 72 USPQ2d 1209, 1211 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000)).

Here, claim 1 recites in pertinent part the following limitations: "an engaging surface positioned on the lever mechanism to apply a lever force on the card during insertion of the card in the slot of the connector. . . ." Giving the representative claim the broadest, reasonable construction, the limitations require an engaging surface of a lever for applying a force to a card during insertion of the card in the slot of a connector and actuation of that lever.

B. OBVIOUSNESS ANALYSIS

"Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious." *Ex Parte Massingill*, No. 2003-0506, 2004 WL 1646421, at *3 (B.P.A.I 2004). The question of obviousness is "based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently. . . ." *In re Zurko*, 258 F.3d 1379, 1383, 59 USPQ2d 1693, 1696 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ2d 1614, 1616 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995)). "A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

Here, Suzuki "provide[s] a card edge connector . . . in which easy attachment and detachment of the card board is further facilitated." (col. 1, ll. 39-42.) "In the card edge connector 31, first and second levers 39(1) and 39(2) are pivoted in the voids at the right and the left ends by short axles to the front and the back extensions." (col. 3, ll. 37-39.) "The first and the second levers 39 are for prying in cooperation the card board 21 to put the card board 21 into and out of mechanical contact with the card edge connector 31 and to bring the connecting pads 25 into and out of the electric connection with the conductive contacts 17." (Id. at ll. 48-52.) "More particularly, the first and the second levers 39 are provided with first and

second side projections 43(1) and 43(2) at their inward edges. The first and the second side projections 43 (suffixes omitted) are situated so as to fit in the side recesses 27 (suffixes omitted) when the card board 21 is put in place." (*Id.* at ll. 52-57.) Because the first and the second side projections fit in the side recesses of the card board, we find that the side projections constitute engaging surfaces.

The Appellants admit, "A careful reading of the Suzuki reference as a whole shows that the first lever 39(1) assists in the insertion of the card. . . ." (Appeal Br. 7.) More specifically, the reference explains that "the first lever 39(1) is used first to support the card board 21 at its one of the side card edges by cooperation of the side projection 43(1) with the side recess 27(1) (FIG. 2)." (col. 4, ll. 2-5.)

For our part, we find that the first lever 39(1) is actuated to apply a rotational force to the card 21 during insertion of the card in the slot of the connector 31. To wit, "the first lever 39(1) is inwardly pushed manually or otherwise to rotate the card board 21 as indicated by a counterclockwise arrow I." (*Id.* ll. 15-17.) By that rotational force, "the card board 21 is brought into mechanical contact with the card edge connector 31," (*id.* ll. 20-21), and "the card board 21 is put in place." (*Id.* l. 24.)

The Appellants allege "that a rotational force is different from the recited lever force." (Req. Reh'g 4.) "Argument in the brief does not take the place of evidence in the record." *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965) (citing *In re Cole*, 326 F.2d 769, 773, 140

USPQ 230, 233 (CCPA 1964)). Here, the Appellants do not explain, let alone proffer evidence, to support their allegation. Because the aforementioned rotational force results from pushing the first lever inwardly, we maintain our finding that the (engaging surface of) the lever applies a force to a card during insertion of the card in the slot of a connector and actuation of that lever. Therefore, we also maintain our affirmance of the rejection of claims 1 and of claims 3-10, which fall therewith.

IV. CARD CONTACTING A LEVER

The Appellants make the following argument.

[W]ith respect to claim 11, Suzuki does not teach "positioning a bottom edge of a card in a slot formed in a card-edge connector such that a first contact surface on a side edge of the card is positioned to contact an engaging surface of a lever mechanism pivotally coupled with the connector". Rather, as admitted by the Board, Suzuki teaches positioning the side edge of the card in the lever 39(1) to support the card.

(Req. Reh'g 4.) Therefore, the issue is whether the prior art would appear to have suggested positioning a card in a card-edge connector such that a surface on a side edge of the card is positioned to contact an engaging surface of a lever.

A. CLAIM CONSTRUCTION

As aforementioned by the Appellants, claim 11 recites in pertinent part the following limitations: "positioning a bottom edge of a card in a slot formed in a card-edge connector such that a first contact surface on a side edge of the card is positioned to contact an engaging surface of a lever

mechanism pivotally coupled with the connector. . . ." Giving the representative claim the broadest, reasonable construction, the limitations require positioning a card in a connector such that a surface on a side edge of the card is positioned to contact an engaging surface of a lever.

B. OBVIOUSNESS ANALYSIS

Figure 4C of Suzuki shows that when "the card board 21 is put in place," (col. 4, l. 24), the bottom edge of the card board fits into the slot 35 of the connector 31. The Figure further shows that when the card board 21 is inserted into the slot, the board's side recesses 27 (suffixes omitted) engage side projections 43 (suffixes omitted) of the levers 39 (suffixes omitted). Based on these showings, we further find that Suzuki would appear to have suggested positioning a card in a connector such that a surface on a side edge of the card is positioned to contact an engaging surface of a lever. Therefore, we maintain our affirmance of the rejection of claim 11 and of claims 13-10, which fall therewith.

V. ENGAGING SURFACE ABOVE EJECTOR

"With respect to claim 14, [the Appellants] first note that the claim recites an engaging surface attached to a surface of the lever mechanism above the ejector to engage a contact surface on the card during insertion of the card in the slot." (Req. Reh'g 4.) They argue, "Neither the Examiner nor the Board address this claim recitation and therefore fail to make an even prima facie case of obviousness." (*Id.*) Therefore, the issue is whether the prior art would appear to have suggested an engaging surface of a lever

located above an ejector to engage a card during insertion of the card into a slot.

A. CLAIM CONSTRUCTION

As aforementioned by the Appellants, claim 14 recites in pertinent part the following limitations: "an engaging surface attached to a surface of the lever mechanism above the ejector to engage a contact surface on the card during insertion of the card in the slot. . . ." Giving the representative claim the broadest, reasonable construction, the limitations require an engaging surface of a lever above an ejector to engage a card during insertion of the card into a slot.

B. OBVIOUSNESS ANALYSIS

Because the first and second side projections 43 (suffixes omitted) of Suzuki's levers 39 (suffixes omitted) fit in the side recesses 27 (suffixes omitted) of the card board 21 when the board is put into the slot 35 of the connector 31, as aforementioned, we find that the side projections constitute engaging surfaces of levers that engage a card during insertion of the card into a slot. Figure 5 of the reference shows that "[o]n disassembling the card board 21 from the card edge connector 31, all a user has to do is to pull the second lever 39(2) outwardly as indicated by a counterclockwise arrow III." (col. 4, ll. 36-39.) "Being turned on the short axle at the left end of the insulator rod 33 in accordance with the counterclockwise arrow III, the wrench arm 41 serves to pry the card board 21 as indicated by a clockwise arrow IV. The second lever 39(2) is pulled apart to be disengaged from the second side edge of the card board 21." (*Id.* ll. 39-44.) Because the wrench

arms 41 (suffixes omitted) serve to disengage the card board 21 from the connector 31, we find that the wrench arm constitutes ejectors. For its part, Figure 2 of Suzuki shows that side projections 43 (suffixes omitted) are located above the wrench arms 41 (suffixes omitted). Based on these showings, we further find that Suzuki would appear to have suggested an engaging surface of a lever above an ejector to engage a card during insertion of the card into a slot.

VI. HOLES

The Appellants allege, "One skilled in the art would understand that 'hole' as used in the present claims would be construed as a through hole, and not a detent as proposed by the Board." (Req. Reh'g 4.) Therefore, the issue is whether the claim requires a through hole.

A. CLAIM CONSTRUCTION

As noted by the Appellants, (Req. Reh'g 4), "limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)). Here, contrary to the Appellants' argument, claim 14 does not specify a hole formed "through" a connector wall. To the contrary, the representative claim recites in pertinent part the following limitations: "a first case attached to a first end of the connector, the first case having first and second opposing planar surfaces defining a channel therebetween, and having a hole formed in each planar surface. . . ."

The Appellants proffer no evidence to support their allegation that one skilled in the art would understand that "hole" as used in the claim is a through hole. Contrary to the allegation, for example, the 1999 Newbery Medal winning book, *Holes*, describes "a juvenile detention home where the boys dig holes, five feet deep by five feet across, in the miserable Texas heat." Alison Follos, *School Library Journal* (1998), http://www.amazon.com/gp/product/product-description/0440414806ref=dp_proddesc_0/102-7340533-7 (book review) cited by www.amazon.com (copy attached). The fact that each of the five feet deep holes had a bottom, makes it no less a hole. Giving claim 14 its broadest, reasonable construction, we maintain that the limitations require holes formed in opposing walls of a connector.

B. OBVIOUSNESS ANALYSIS

Tondreault discloses "[a]n electrical connector . . . for receiving a daughtercard. . . ." (col. 2, ll. 16-17.) "The connector includes a socket formed to include an elongated slot for receiving the daughtercard therein. . . ." (*Id.* ll. 19-21.) "Both ends of socket 10 are formed to include an opening 20 having an identical configuration for receiving an ejector 22 therein. An ejector 22 is pivotably coupled to each end of socket 10 within opening 20." (col. 3, ll. 19-22.)

Each "[e]jector 22 includes a body portion 24 and a head 26 formed integrally with body portion 24 to facilitate pivotal movement of ejector 22." (*Id.* ll. 27-29.) More specifically, "[a] pair of axles 28 are formed on opposite sides of body portion 24. Axles 28 define a pivot axis 30 which is

generally perpendicular to elongated slot 14 formed along a longitudinal axis of socket 10." (*Id.* ll. 31-34.) We maintain our finding that a person of ordinary skill in the art would have understood that holes must be formed in the opposing walls of the connector to receive the axles 28 of each ejector 22 so that the ejector can pivot thereabout. For similar reasons, we maintain our further finding that a person of ordinary skill in the art would have understood that holes must be formed in the opposing walls of Suzuki's connector 31 to receive the axles (see Figs. 4A-4C), of each lever 39 so that the ejector can pivot thereabout. Therefore, we also maintain our affirmance of the rejection of claim 14 and of claims 15-19, which fall therewith.

VII. CONCLUSION

In summary, we deny the Appellants' request to reverse the rejection of claims 1, 3-11, and 13-19 under § 103(a). No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

DENIED

KIS

JOHN P. WARD
BLAKELY, SOFOLOFF, TAYLOR & ZAFMAN, L.L.P.
SEVENTH FLOOR
12400 WILSHIRE BOULEVARD
LOS ANGELES, CA 90025-1026